

IN THE CLAIMS:

Please amend the claims as follows:

1. (CURRENTLY AMENDED) An optical guide which guides light incident therethrough in a lengthwise direction thereof, makes uniform the light in an effective width range of the lengthwise direction and outputs the uniform light, the optical guide comprising:

a first surface to receive the incident light, comprising a plurality of grooves, each of the grooves comprising:

a reflective slopes to reflect and make uniform the incident light, each of the reflective slopes having a stripe shape and forming a varying angle with respect to the lengthwise direction of the optical guide, and

a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light; and

a second surface, which is opposite to the first surface and is an output surface from which the light reflected from the reflective slopes is output,

wherein the respective angles formed by respective lengths of the reflective slopes with respect to the lengthwise direction gradually become larger when moving further from a side of the guide onto which the light is incident.

2. (ORIGINAL) The optical guide of claim 1, wherein the plurality of reflective slopes are formed so that an interval between the reflective slopes is varied.

3. (ORIGINAL) The optical guide of claim 2, wherein the interval between the reflective slopes gradually becomes smaller when moving further from a side of the guide onto which the

light is incident.

4. (CANCELLED)

5. (ORIGINAL) The optical guide of claim 1, wherein the reflective slopes have a width that gradually becomes greater when moving closer to a side of the guide onto which the light is incident and gradually becomes smaller when moving further from the side onto which the light is incident.

6. (CANCELLED)

7. (CURRENTLY AMENDED) An optical guide which guides light incident therethrough in a lengthwise direction thereof, makes uniform the light in an effective width range of the lengthwise direction and outputs the uniform light, the optical guide comprising:

a first surface to receive the incident light, comprising a plurality of grooves, each of the grooves comprising:

a reflective slope to reflect and make uniform the incident light, each of the reflective slopes having a stripe shape and forming a predetermined angle with respect to the lengthwise direction of the optical guide, an interval between the reflective slopes being varied, and

a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light; and

a second surface, which is opposite to the first surface and is an output surface from which the light reflected from the reflective slopes is output,

wherein the respective angles formed by respective lengths of the reflective slopes with

respect to the lengthwise direction gradually become larger when moving further from a side of the guide onto which the light is incident .

8. (CANCELLED)

9. (ORIGINAL) The optical guide of claim 7, wherein the plurality of reflective slopes have a uniform width.

10-11. (CANCELLED)

12. (CURRENTLY AMENDED) An image forming apparatus comprising an eraser which initializes a surface potential of a photoreceptor medium, and an auxiliary transfer device, which facilitates transfer of a toner image by radiating light on a surface of the photoreceptor medium, wherein the eraser and the auxiliary transfer device comprise:

a light source to emit light; and

an optical guide on a side of the apparatus having the light source, which guides the light emitted from the light source and incident therethrough in a lengthwise direction of the optical guide, makes uniform the light in an effective width range of the lengthwise direction and outputs the uniform light,

wherein the optical guide comprises:

a first surface to receive the incident light, comprising a plurality of grooves, each of the grooves comprising a reflective slope to reflect and make uniform the incident light, each having a stripe shape and a length forming a varying angle with respect to the lengthwise direction of the optical guide, and a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light, and

a second surface which is opposite to the first surface and is an output surface from which the light reflected from the reflective slopes is output.

13. (ORIGINAL) The apparatus of claim 12, wherein the plurality of reflective slopes are formed so that an interval therebetween is varied.

14. (CURRENTLY AMENDED) ~~The apparatus of claim 13~~ An image forming apparatus comprising an eraser which initializes a surface potential of a photoreceptor medium, and an auxiliary transfer device, which facilitates transfer of a toner image by radiating light on a surface of the photoreceptor medium,

wherein the eraser and the auxiliary transfer device comprise:

a light source to emit light; and

an optical guide on a side of the apparatus having the light source, which guides the light emitted from the light source and incident therethrough in a lengthwise direction of the optical guide, makes uniform the light in an effective width range of the lengthwise direction and outputs the uniform light,

wherein the optical guide comprises:

a first surface to receive the incident light, comprising a plurality of reflective slopes to reflect and make uniform the incident light, each having a stripe shape and a length forming a varying angle with respect to the lengthwise direction of the optical guide, and

a second surface which is opposite to the first surface and is an output surface from which the light reflected from the reflective slopes is output, wherein the plurality of reflective slopes are formed so that an interval therebetween is varied and the interval between the reflective slopes gradually becomes smaller when moving further from a side onto which the light is incident.

15. (PREVIOUSLY PRESENTED) The apparatus of claim 12, wherein the respective angles formed by the respective lengths of the reflective slopes with respect to the lengthwise direction gradually become larger when moving further from a side onto which the light is incident.

16. (ORIGINAL) The apparatus of claim 12, wherein the reflective slopes are formed to have a width that gradually becomes greater when moving closer to a side onto which the light is incident and gradually becomes smaller when moving further from the side onto which the light is incident.

17. (CURRENTLY AMENDED) The apparatus of claim 12, ~~further comprising a~~wherein the groove having grooves each have a triangular structure and a stripe shape.

18. (CURRENTLY AMENDED) An image forming apparatus comprising an eraser which initializes a surface potential of a photoreceptor medium, and an auxiliary transfer device, which facilitates transfer of a toner image by radiating light on a surface of the photoreceptor medium,

wherein the eraser and the auxiliary transfer device each comprises:

a light source to emit light; and

an optical guide on a side of the apparatus having the light source, which guides the light emitted from the light source and incident therethrough in a lengthwise direction of the optical guide, makes uniform the light in an effective width range of the lengthwise direction and outputs the uniform light,

wherein the optical guide comprises:

a first surface to receive the incident light, comprising a plurality of grooves, each of the grooves comprising a reflective slope~~slope~~ to reflect and make uniform the incident light, each having a stripe shape and a length forming a varying angle with respect to the lengthwise

direction of the optical guide, and a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light, and

a second surface which is opposite to the first surface and is an output surface from which the light reflected from the reflective slopes is output.

19. (ORIGINAL) The apparatus of claim 18, wherein the plurality of reflective slopes are parallel to one another.

20. (ORIGINAL) The apparatus of claim 18, wherein the plurality of reflective slopes have a uniform width.

21. (CURRENTLY AMENDED) ~~The apparatus of claim 20, further comprising:~~ An image forming apparatus comprising an eraser which initializes a surface potential of a photoreceptor medium, and an auxiliary transfer device, which facilitates transfer of a toner image by radiating light on a surface of the photoreceptor medium,

wherein the eraser and the auxiliary transfer device each comprises:

a light source to emit light;

an optical guide on a side of the apparatus having the light source, which guides the light emitted from the light source and incident therethrough in a lengthwise direction of the optical guide, makes uniform the light in an effective width range of the lengthwise direction and outputs the uniform light,

wherein the optical guide comprises:

a first surface to receive the incident light, comprising a plurality of reflective slopes to reflect and make uniform the incident light, each having a stripe shape and a length forming a varying angle with respect to the lengthwise direction of the optical guide, and

a second surface which is opposite to the first surface and is an output surface from which the light reflected from the reflective slopes is output;

a groove on the first surface having a triangular structure and a stripe shape; and

a slope which connects the reflective slopes to a portion of the first surface along the lengthwise direction and having a width greater than a width of the reflective slopes, which forms an incline with respect to the lengthwise direction,

wherein the plurality of reflective slopes are parallel to one another and the plurality of reflective slopes have a uniform width.

22. (CURRENTLY AMENDED) The apparatus of claim 18, ~~further comprising a~~wherein the grooves each have ~~groove on the first surface having~~ a triangular structure and a stripe shape.

23. (CURRENTLY AMENDED) An optical guide comprising:

a first surface to receive incident light and make uniform the incident light, the first surface comprising a plurality of grooves, each of the grooves comprising a reflective ~~slopes~~slope to reflect the incident light and having varying angles with respect to a lengthwise direction of the optical guide and a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light; and

a second surface, opposite the first surface, to output the uniform light from the first surface,

wherein respective angles formed by respective lengths of the reflective slopes with respect to the lengthwise direction gradually become larger when moving further from a side of the guide onto which the light is incident.

24. (PREVIOUSLY PRESENTED) The optical guide of claim 23, wherein each of the reflective slopes has a stripe shape.

25. (CANCELLED)

26. (CURRENTLY AMENDED) The optical guide of claim ~~25~~23, further comprising a cover to cover the light source.

27. (CANCELLED)

28. (CURRENTLY AMENDED) The optical guide of claim 23, wherein the ~~reflective slopes are formed by a plurality of grooves~~ each having a triangular cross section.

29. (ORIGINAL) The optical guide of claim 28, wherein a reflectivity of the optical guide decreases with decreasing distance from a source of the incident light.

30. (PREVIOUSLY PRESENTED) The optical guide of claim 29, wherein the reflective slopes are slanted and at an interval so that portions thereof overlap when projected on an axis in the lengthwise direction of the optical guide.

31. (CURRENTLY AMENDED) An optical guide comprising:
a first surface to receive incident light and make uniform the incident light; and
a second surface, opposite the first surface, to output the uniform light from the first surface,

wherein the first surface comprises a plurality of grooves, each of the grooves having a triangular cross section and comprising a reflective slope ~~slope are formed by a~~

~~plurality of grooves having a triangular cross section and~~ a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light,

a depth of the grooves increases with decreasing distance from a source of the incident light,

wherein respective angles formed by respective lengths of the reflective slopes with respect to a lengthwise direction of the optical guide gradually become larger when moving further from a side of the guide onto which the light is incident.

32. (PREVIOUSLY PRESENTED) The optical guide of claim 23, wherein the reflective slopes have a uniform width.

33. (CURRENTLY AMENDED) An optical guide comprising:

a first surface to receive incident light and make uniform the incident light, the first surface comprising a plurality of grooves, each of the grooves comprising a reflective slope and a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light; and

a second surface, opposite the first surface, to output the uniform light from the first surface,

wherein the reflective slopes have a width that increases with decreasing distance from a source of the incident light; wherein respective angles formed by the respective lengths of reflective slopes with respect to the lengthwise direction gradually become larger when moving further from a side of the guide onto which the light is incident.

34. (CURRENTLY AMENDED) An image forming apparatus, comprising:

a photoreceptor; and

an eraser to initialize a surface potential of the photoreceptor, the eraser comprising an optical guide comprising:

a first surface to receive incident light, comprising a plurality of grooves, each of the grooves comprising a reflective slope slopes to reflect and make uniform the incident light and a connective slope connecting the reflective slope to the first surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light, respective lengths of the reflective slopes having varying angles with respect to a lengthwise direction of the optical guide, and

a second surface, opposite the first surface, to output the light reflected from the reflective slopes.

35. (ORIGINAL) The apparatus of claim 34, further comprising a single LED to emit the incident light.

36. (ORIGINAL) The apparatus of claim 35, wherein the LED is between the first and second surfaces.

37. (CURRENTLY AMENDED) An image forming apparatus, comprising:

a photoreceptor; and

a transfer device to radiate light on a surface of the photoreceptor, the transfer device comprising an optical guide comprising:

a first surface to receive incident light, comprising a plurality of grooves, each of the grooves comprising a reflective slope slopes to reflect and make uniform the incident light, respective lengths of the reflective slopes having varying angles with respect to a lengthwise direction of the optical guide, and a connective slope connecting the reflective slope to the first

surface, an angle of the reflective slope with respect to the incident light being greater than an angle of the connective slope with respect to the incident light, and

a second surface, opposite the first surface, to output the light reflected from the reflective slopes.

38. (ORIGINAL) The apparatus of claim 37, further comprising a single LED to emit the incident light.

39. (ORIGINAL) The apparatus of claim 38, wherein the LED is between the first and second surfaces.

40. (PREVIOUSLY PRESENTED) The optical guide of claim 1, further comprising third and fourth surfaces, each of the third and fourth surfaces being between the first and second surfaces, wherein each of the lengths of the slopes extends from the third surface to the fourth surface.